REMARKS

I. Status of the Claims

Claims 1-34 are pending;
Claims 1-34 stand rejected;
Claims 1, 15, and 17 have been amended. No new matter has been added.
Claims 35 and 36 have been added. No new matter has been added.
Claims 18-34 have been cancelled.

II. REJECTION UNDER 35 U.S.C. §102

The examiner has rejected claims 108, 10-20, 22 and 24-33 under 35 U.S.C. §102(b) as allegedly being anticipated by USP No. 3,668,106 to Ota. It is the examiners position that with regard to independent claims 1, 15, 18 and 28 and dependent claims 16 and 19, Ota discloses a multi-color electrophoretic image display including all the elements claimed. With regard to dependent claim 12, the examiner states "Ota discloses spacers 38 and 40 for retaining a electrophoretic fluid 22." And for claim 13, the examiner states, "as can be seen in Figs. 8 and 12b, the spacer 38 is slightly taller than the cells enclosing electrophoretic material 22."

Applicant respectfully disagrees with and explicitly traverses the examiner's reasons for rejecting the claims. However, in the interest of advancing the prosecution of this matter, applicant has amended independent claims 1 and 15 and requested claims 18 and 28 be cancelled. More specifically, claims 1 and 15 have been amended by including the subject matter in claims 12 and 13 therein to recite that "a space is maintained by a spacer slighter taller than the cells." No new matter has been added.

A claim is anticipated only if each and every element recited therein is expressly or inherently described in a single prior art reference. As will be shown, Ota cannot be said to anticipate the invention claimed in amended claims 1 and 15, as Ota does not include each and every element claimed.

Claim 1, as amended, now recites:

> 1. (Amended) A mutli-color electrophoretic image display, comprising:
> a first electrode defining a plurality of cells;
> a transparent second electrode separated from the first electrode by a space; said space being maintained by a spacer slightly taller than said cells joining said first and second electrodes;
> an electrophoretic fluid disposed in the space between the first and second electrodes, the electrophoretic fluid including a plurality of electrophoretic particles dispersed in the cells of the first electrode, the electrophoretic particles in the cells being electrophoretically movable to and from adjacent positions on the transparent second electrode;
> wherein the electrophoretic particles, in selected ones of the cells that have been electrophoretically moved to their adjacent positions on the transparent second electrode, reflect light entering the display thereby forming an image which can be more than one color.

Ota, on the other hand, discloses an electrophoretic display device, which in one embodiment, includes "an insert between two major housing walls, a colorless spacer such as a porous layer or a sheet having a lot of projections thereon as shown in Figure 8c." See col. 7, lines 13-17.

Contrary to the examiner's position, Ota does not disclose "a spacer slightly taller that the cells" as Ota specifically teaches away from the spacer being taller than the cells. More specifically, Ota teaches, in col. 10, lines 22-25, "[t]he advantages of dividing the suspension layer into a plurality of suspension units are as follows: a uniform display can

be produced because flow of the suspension is restricted to the interior of each space." Ota states the advantages of restricting the flow of suspension as being, "[s]aid plurality of suspension units can have different optical reflective properties from each other." See col. 10, lines 25-27.

Accordingly, Ota cannot be said to disclose the element "a spacer taller than the cells" because this would be contrary to the advantage recited by Ota. Such a spacer would allow the flow of suspension between cells. However, the flow of suspension between cells caused by "a spacer being taller than the cell" is noted in the written description of the instant application on page 8, lines 19-20, which state, [t]he spacers 13 have a thickness T which is at least 1 mil. thicker than the height H of the cell walls 26 which creates a gap G ... This gap G **permits** the electrophoretic fluid 14 to **flow** into and fill up each cell." (emphasis added).

Hence, Ota cannot be said to anticipate the present invention, as recited in amended claim 1 because Ota does not disclose "a spacer taller than the cells" as suggested by the examiner.

Having shown that Ota does not disclose each and every element of the invention as recited in amended claim 1, applicant submits that present invention recited in claim 1 is patently distinct over the prior art cited. Accordingly, the examiner's rejection of claim 1 has been overcome and can no longer be sustained. Thus, applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of claim 1.

With regard to claim 15, this claim has been amended in a manner similar to that of claim 1. Whereas the examiner has recited the same reason for rejecting claim 15 as for rejecting claim 1, the applicant's remarks made, herein, in overcoming the rejection of

claim 1 are also applicable in response to the rejection of claim 15.

Accordingly, applicant repeats those remarks make in overcoming the rejection of claim 1 in response to the reasons for rejecting claim 15.

Applicant respectfully submits that the examiner's reason for rejecting claim 15 has been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of claim 15.

With regard to claims 2-11, 14, and 17, these claims depend from and include all the subject matter of independent claims 1 and 15, respectively, which have been shown to be allowable. Accordingly claims 2-11, 14 and 17 are allowable by virtue of their dependency upon allowable base claims.

With regard to claims 18-22 and 24-33, applicant has requested these claims be cancelled. Accordingly, the examiner's rejection of these claims is no longer valid.

Having shown that the invention recited in independent claims 1 and 15 is patently distinct from the reference cited, Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of claims 1-11, 14, 15 and 17.

III. REJECTION UNDER 35 U.S.C. §103

The examiner has rejected claim 9 under 35 U.S.C. §103(a) as allegedly being unpatentable over Ota in view of USP 5,467,217 to Check III. The examiner further rejected claims 21, 23, and 34 under 35 U.S.C. 103(a) as allegedly being unpatentable over Ota in view of USP 5,739,946 to Iwanaga.

With regard to claim 9, it is the examiner's position that "Ota discloses a multi-color electrophoretic image display ... Chuck III teaches that the particles coated with a solid polymeric can be used in an electrophoretic display. It would have been obvious ...

to use the particles in the electrophoretic display by reducing the tendency of particles to agglomerate and keep them dispersed." With regard to claim 21, 23 and 24, it is the examiner's position that "Ota discloses a multi-color electrophoretic image display ... Iwanaga teaches a display device, wherein three layers of cells are used for realizing the color display. ... it would have been obvious ... to use the alternative structure for the color display device of Ota as taught by Iwanaga, because it would allow different colors by a single pixel and therefore to obtain a good quality of a color display."

Applicant respectfully disagrees with, and explicitly traverses, the examiner reasons for rejecting the claims, as the references cited, individually or in combination, do not render obvious the present invention.

A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest all the claim limitations.

With regard to claim 9, this claim depends from clam 1, which has been shown to be patently distinct from the teachings Ota. Accordingly, one would not look to combine the teachings of Ota with that of Chuck as suggested by the examiner.

Accordingly, applicant submits that the reason for the examiner's rejection of claim 9 has been overcome and can no longer be sustained. Applicant respectfully requests reconsideration, withdrawal of the rejection and allowance of the claims.

With regard to claims 21, 23 and 34 applicant has requested these claims be cancelled. Accordingly, the examiner's rejection of these claims is no longer valid.

Have shown that neither Ota nor Chuck in combination render obvious the subject matter recited in independent claim 1 and dependent claim 9, applicant submits that the examiner's rejection of the claims can no longer be sustained. Applicant respectfully requests withdrawal of the rejection and allowance of claim 9.

IV. New Claims

Applicant has added new claims 35 and 36 dependent from claim 1. No new matter has been added. Claims 35 and 36 recite subject matter similar to that recited in claims 34 and 25, respectively.

As no new matter has been added, applicant respectfully requests that new claims 35 and 36 be entered.

V. Summary

Applicants believe that the Examiner's rejections under 35 U.S.C. §§ 102 and 112, 2nd paragraph, have been addressed and overcome. None of the references, either alone, or in combination, anticipate the invention as claimed. Accordingly, reconsideration and withdrawal of the rejections is respectfully requested.

If the Examiner believes the prosecution of this application would be advanced by a telephone call, the Examiner is invited to contact the Applicant's attorney at the telephone indicated below.

VI. Fees

No fees are believed required for the filing of this Amendment and Response. However, if there are any fees because of this Amendment and Response, or for other matters regarding this application, the Examiner is authorized to charge such fees to Duane, Morris Deposit Account No. 50-1057.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW THE CHANGES MADE

IN THE SPECIFICATION:

Kindly replace pages 4 and 5 with the following:

position thereby displaying primary colors in the second display position and causing the display to provide full color capability according to particle position in the cells.

BRIEF DESCRIPTION OF THE DRAWINGS

The advantages, nature, and various additional features of the invention will appear more fully upon consideration of the illustrative embodiments now to be described in detail in connection with accompanying drawings, wherein:

FIG. 1A is an exploded perspective view of a multi-color electrophoretic image display (EPID) according to a first embodiment of the invention;

FIG. 1B is a front elevational view of the multi-color EPID illustrated in FIG. [1B] 1A;

FIG. 2A is an elevational view of an anode used in the EPID of the invention illustrating anode lines formed on the inner surface of the anode;

FIG. 2B is an elevational view of the anode illustrating a color filter array formed on the outer surface of the anode;

FIG. 2C is an elevational view of the anode illustrating an alternate color filter array design formed on the outer surface of the anode;

FIG. 3A is an elevational view of a cathode used in the EPID of the invention illustrating a two dimensional array of cells formed on the inner surface of the cathode;

FIG. 3B is a perspective view of a segment of the cathode illustrating an integrated circuit for driving the pixel cells formed on the outer surface of the cathode;

FIG. 4 is a cross-sectional view through the EPID of the first embodiment of the invention;

[4]

FIGS. 5A and 5B are cross-sectional views through the EPID of the first embodiment of the invention illustrating the operation thereof;

FIG. 6 is an elevational view illustrating the cathode of an EPID according to a second embodiment of the invention;

FIG. 7A is a cross-sectional view illustrating an EPID according to a third embodiment of the invention;

FIG. 7B is an elevational view illustrating the cathode of the EPID of FIG. 7A;

FIG. [7B] 7C is an enlarged view of the cathode shown in FIG. 7B;

FIG. 8A is a front elevational view of an EPID according to a fourth embodiment of the invention;

FIG. 8B is a side elevational view of the EPID of the fourth embodiment of the invention; and

FIG. 8C is an exploded view of the EPID of the fourth embodiment of the invention.

It should be understood that the drawings are for purposes of illustrating the concepts of the invention and are not to scale.

DETAILED DESCRIPTION OF THE INVENTION

FIGS 1A and 1B collectively show a multi-color electrophoretic image display (EPID) 10 according to a first embodiment of the invention. The EPID 10 comprises a pair of parallel electrodes 11, 12 sealingly assembled together with spacers 13 to form a liquid and gas sealed enclosure having a small space S between the electrodes 11, 12 (FIG. 4), and an electrophoretic fluid 14 filling the space S between the electrodes. The

electrophoretic fluid 14 is conventional, comprising a dielectric liquid of a dark color, such as a blue or red, having suspended therein

[5]

Kindly **Cancel** claims 12, 13 and 18-34.

Kindly **AMEND** the claims as follows:

Amend claim 1 as:

1. (Amended) A mutli-color electrophoretic image display, comprising:

a first electrode defining a plurality of cells;

a transparent second electrode separated from the first electrode by a space; said space being maintained by a spacer slightly taller than said cells joining said first and second electrodes;

an electrophoretic fluid disposed in the space between the first and second electrodes, the electrophoretic fluid including a plurality of electrophoretic particles dispersed in the cells of the first electrode, the electrophoretic particles in the cells being electrophoretically movable to and from adjacent positions on the transparent second electrode;

wherein the electrophoretic particles, in selected ones of the cells that have been electrophoretically moved to their adjacent positions on the transparent second electrode, reflect light entering the display thereby forming an image which can be more than one color.

Amend claim 15 as:

15. (Amended) A multi-color electrophoretic image display comprising pixels of at least two different colors, the pixels defined by electrophoretic particle-containing cells formed on an electrode;

a second transparent electrode, separated from said electrode by a spacer slightly taller than said pixels, wherein the electrophoretic particles, in selected one of the cells [that have been displayed], are electrophoretically movable to and from adjacent positions on said transparent second electrode and reflect light entering the display thereby forming an image which can be more than one color.

Amend claim 17 as:

17. (Amended) The display according to claim [16] 15, wherein the transparent second electrode includes a multi-color light filter array that filters and thereby colors light reflected by the electrophoretic particles.

Add New claim 35:

35. (New) The display according to claim 1, wherein said cells are disposed in different planes.

Add New claim 36:

36. (New) The display according to claim 1 further comprising:

a filter array deposited on said second electrode including filters selected from the group comprising: blue filters, red filters, green filters.